

GOLDIN, M.; TUNIN, G.

Establish amortization deductions correctly. Fin. SSSR 21 no.10:  
(MIRA 13:10)  
62-64 0 '60.  
(Moscow—Amortization)

USER/Mining

Coal Cutting Machines

Mechanization

Feb 49

"Results of Shaft Tests of Cutting Machine MV-60,"  
M. A. Gol'din, 2 pp

"Ugel." No ?

Results of tests at "Donbassentrakt" Mine  
Combine revealed that the operational part, the  
feeding and cutting parts, and the miller of  
cutting machine MV-60 perform well and are satia-  
factory for cutting coal of various hardnesses.  
Power of machine, tractive force, high speed, and  
dependability of construction assure its high  
FIDB

48/49T83

USER/Mining (Contd)

Feb 49

productiveness. Gives two tables of experimental  
results and four illustrations of machine parts.

48/49T83

GOL'DIN, M.A.

Electromechanical equipment in the mine of the near future. Ugol'.  
31 no.5:34-35 My '56.  
(MLRA 9:8)

1. Kombinat Voroshilovgradshakhtstroy.  
(Electricity in mining)

GOLDIN, F. A., Cand of Tech Sci -- (diss) "Investigation and development  
of a new method of charging mine locomotives for underground hauling."  
Dnepropetrovsk, 1967, 22 pp (Dnepropetrovsk Mining Institute im Artem)  
100 copies (KL, 31-67, 10%)

GOL'DIN, N.A., kand. tekhn. nauk

Mechanization and automatization of mines. Ugol' Ukr. 3 no.11:3-  
N '59. (MIRA 13:3)

1. Nachal'nik energomekhanicheskogo upravleniya Luganskogo sovnarkhoza.  
(Automatic control)  
(Lugansk Province--Coal mining machinery)

GOL'DIN, M.A., kand.tekhn.nauk; PLYUSHCHOV, I.G., inzh.

Remote control in mines of the Lugansk Economic Region. Ugol'  
35 no.1:11-16 Ja '60. (MIRA 13:5)

1. Luganskiy sovmarkhoz (for Gol'din). 2. Tresz' Luganskugleavto-  
matika (for Plyushchov).

(Remote control)  
(Lugansk Province--Coal mines and mining)

KUZ'MICH, A.S.; GOL'DIN, M.A.; SHPARBERG, Ye.M.; FROLOV, A.G.

Hydraulic hoisting system with an AZV-1 loading machine in the  
No.1 "XIX Parts"ezd" Mine of the Leninugol' Trust. Ugol' 35  
no.1:35-39 Ja '60. (MIRA 13:5)

1. Luganskiy sovnarkhoz (for Kuz'mich, Gol'din). 2. Kuznetskiy  
filial Giproglemasha (for Shparberg). 3. Institut gornogo  
dela AN SSSR (for Frolov).  
(Lugansk Province--Mine hoisting)  
(Hydraulic mining)

KUZ'MICH, A.S.; GOL'DIN, M.A.

Remote control in coal mines. Ugol' 35 no. 9:54-57 S '60.  
(MIRA 1):10)

1. Luganskiy sovnarkhoz (for Kuz'mich). 2. Institut gornogo dela  
AN USSR (for Gol'din).

(Remote control)  
(Coal mines and mining--Equipment and supplies)

VARTANYANTS, A.M.; GOL'DIN, M.A., kand.tekhn.nauk; SNAOVSKIY, Ye.S.

Discussion of Iu.V.Kozin and L.V.Grishpun's article "Levels and  
depth of the automation of operations in mining." Tgol' 36 no.7:  
17-23 Jl '61. (MIRA 15:2)

1. Dongiprouglemash (for Vartanyants). 2. Institut gornogo dela  
AN USSR (for Gol'din).  
(Coal mines and mining) (Automation)  
(Kozin, Iu.V.) (Grishpun, L.V.)

COL'DIN, M.A., kand.tekhn.nauk; PARAFENKO, V.I., inzh.; DERCACHEV, L.G., inzh.

Some problems of the application of telemechanics in mines.  
(MIRA 15:9)  
Ugol' Ukr. 6 no.9:11-13 S '62.

1. Institut gornogo dela AN UkrSSR.  
(Mining engineering) (Remote control)

KHUDOSOVTSYEV, N.M.; PAK, V.S., akademik; BORISHENKO, K.S.; PYATKIN, A.M.,  
kand. tekhn. nauk; GOL'DIN, M.A., kand. tekhn. nauk

Urgent problems in the development of the coal industry.  
Ugol' 38 no.6:62-63 Je '63. (MIRA 16:8)

1. Predsedatel' Donetskogo soveta narodnogo khozyaystva (for  
Khudosovtsev). 2. AN UkrSSR (for Pak). 3. Chlen-korrespondent  
AN UkrSSR (for Borisenko).  
(Coal mines and mining)

GOL'DIN, M. S., 1944-1991, "Voprosy Sistem Sistem. L.6

[Voprosy Sistem. Sistem. Sistem. Telemekhanika i ego vyuzyvanie v radioelektronike. Minsk, Nodina, 1984. 260 p.]  
(X1.3 12\*)

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CIA-RDP86-00513R000515630005-6  
CIA-RDP86-00513R000515630005-6"

SOLDEE, M.F.

"New Method of quantitative colorimetric determination of Microorganisms,"

SOLDEE, M.F. "New Method of quantitative colorimetric determination of Microorganisms,"  
vol. 3, no. 2, 1934, pp.241-276. [G.B. 1932]

SO; Sirc Si-20-53 1<sup>st</sup> Dec. 1953

Microbiology

The role of the decomposition of proteins and the products of such decomposition in self-heating. M. I. Goldin. *Biol. State Inst. Agr. Mikrobiol.*, U.S.S.R., No. 2, 155-75 (1946). *Chem. Zentr.* 1938, I, 105; cf. Lerner and Bonney, C. I. 20, 294. The assumption of the existence of sp. groups of thermophilic bacteria is unfounded; sp. bacterial processes have a decisive significance in the phenomenon of spontaneous heating. One of these processes is the utilization of proteins and the products of their hydrolysis as a source of energy by the micro-organisms. The chief energy loss in the decomposi-  
tion of proteins is connected not with the hydrolysis but rather with the decomposi-  
tion of the amino acids. The production of heat by the bacteria is considerably greater when their development is at the cost of proteins or the products of their hydrolysis as a single source of C than when the development of the same bacteria at the same rate of growth is at the expense of glucose. The production of heat at the expense of proteins and the products of their hydrolysis is much greater under aerobic than under anaerobic conditions; the production of heat, therefore, is related to oxidation processes. It is practically im-  
possible for the decomposi-  
tion of proteins under anaerobic conditions to result in spontaneous heating. There exists a certain regularity between the curves of heat produc-  
tion by the bacteria and the decomposi-  
tion of proteins: the energy loss in the decomposi-  
tion of proteins takes place chiefly in that phase which is characterized by the splitting off of NH<sub>3</sub> groups. The heat liberated during decomposi-  
tion amounts at most to 2% of the extra heat. The decomposi-  
tion of proteins and of their decomposi-  
tion products is well known as one of the causes of spontaneous heating under certain condi-  
tions. M. G. M. on

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REF ID: A6513R000515630005-6

100 AND NO ORDERS  
PROCESSED AND ASPECTS INDEXED

AM

GOLDIN (M. I.). On the so-called masking of virus diseases.—C.R.  
Acad. Sci. U.R.S.S., N.S., xv, 9, pp. 567-569, 1937.

The results of experiments in 1936 in the Crimea, in which *Nicotiana glutinosa* plants were inoculated with the juice obtained from aseptically collected apical leaves of apparently healthy tobacco plants taken from field plots with 36, 28, 28, and 18 per cent., respectively, of the plants visibly infected with mosaic, showed that 87, 60, 43, and 20 per cent., respectively, of the apparently healthy plants carried the mosaic virus in a masked condition, the real infection percentage in those plots being thus raised to 91, 63, 59, and 33, respectively. This indicates that determination of percentage infection with mosaic in tobacco plantations, and probably also in the case of other virus diseases by external symptoms alone is not reliable.

APPENDIX METALLURGICAL LITERATURE CLASSIFICATION

100-349	400-449	500-549	600-649	700-749	800-849	900-949	1000-1049	1100-1149	1200-1249	1300-1349	1400-1449	1500-1549	1600-1649	1700-1749	1800-1849	1900-1949	2000-2049	2100-2149	2200-2249	2300-2349	2400-2449	2500-2549	2600-2649	2700-2749	2800-2849	2900-2949	3000-3049	3100-3149	3200-3249	3300-3349	3400-3449	3500-3549	3600-3649	3700-3749	3800-3849	3900-3949	4000-4049	4100-4149	4200-4249	4300-4349	4400-4449	4500-4549	4600-4649	4700-4749	4800-4849	4900-4949	5000-5049	5100-5149	5200-5249	5300-5349	5400-5449	5500-5549	5600-5649	5700-5749	5800-5849	5900-5949	6000-6049	6100-6149	6200-6249	6300-6349	6400-6449	6500-6549	6600-6649	6700-6749	6800-6849	6900-6949	7000-7049	7100-7149	7200-7249	7300-7349	7400-7449	7500-7549	7600-7649	7700-7749	7800-7849	7900-7949	8000-8049	8100-8149	8200-8249	8300-8349	8400-8449	8500-8549	8600-8649	8700-8749	8800-8849	8900-8949	9000-9049	9100-9149	9200-9249	9300-9349	9400-9449	9500-9549	9600-9649	9700-9749	9800-9849	9900-9949	10000-10049	10100-10149	10200-10249	10300-10349	10400-10449	10500-10549	10600-10649	10700-10749	10800-10849	10900-10949	11000-11049	11100-11149	11200-11249	11300-11349	11400-11449	11500-11549	11600-11649	11700-11749	11800-11849	11900-11949	12000-12049	12100-12149	12200-12249	12300-12349	12400-12449	12500-12549	12600-12649	12700-12749	12800-12849	12900-12949	13000-13049	13100-13149	13200-13249	13300-13349	13400-13449	13500-13549	13600-13649	13700-13749	13800-13849	13900-13949	14000-14049	14100-14149	14200-14249	14300-14349	14400-14449	14500-14549	14600-14649	14700-14749	14800-14849	14900-14949	15000-15049	15100-15149	15200-15249	15300-15349	15400-15449	15500-15549	15600-15649	15700-15749	15800-15849	15900-15949	16000-16049	16100-16149	16200-16249	16300-16349	16400-16449	16500-16549	16600-16649	16700-16749	16800-16849	16900-16949	17000-17049	17100-17149	17200-17249	17300-17349	17400-17449	17500-17549	17600-17649	17700-17749	17800-17849	17900-17949	18000-18049	18100-18149	18200-18249	18300-18349	18400-18449	18500-18549	18600-18649	18700-18749	18800-18849	18900-18949	19000-19049	19100-19149	19200-19249	19300-19349	19400-19449	19500-19549	19600-19649	19700-19749	19800-19849	19900-19949	20000-20049	20100-20149	20200-20249	20300-20349	20400-20449	20500-20549	20600-20649	20700-20749	20800-20849	20900-20949	21000-21049	21100-21149	21200-21249	21300-21349	21400-21449	21500-21549	21600-21649	21700-21749	21800-21849	21900-21949	22000-22049	22100-22149	22200-22249	22300-22349	22400-22449	22500-22549	22600-22649	22700-22749	22800-22849	22900-22949	23000-23049	23100-23149	23200-23249	23300-23349	23400-23449	23500-23549	23600-23649	23700-23749	23800-23849	23900-23949	24000-24049	24100-24149	24200-24249	24300-24349	24400-24449	24500-24549	24600-24649	24700-24749	24800-24849	24900-24949	25000-25049	25100-25149	25200-25249	25300-25349	25400-25449	25500-25549	25600-25649	25700-25749	25800-25849	25900-25949	26000-26049	26100-26149	26200-26249	26300-26349	26400-26449	26500-26549	26600-26649	26700-26749	26800-26849	26900-26949	27000-27049	27100-27149	27200-27249	27300-27349	27400-27449	27500-27549	27600-27649	27700-27749	27800-27849	27900-27949	28000-28049	28100-28149	28200-28249	28300-28349	28400-28449	28500-28549	28600-28649	28700-28749	28800-28849	28900-28949	29000-29049	29100-29149	29200-29249	29300-29349	29400-29449	29500-29549	29600-29649	29700-29749	29800-29849	29900-29949	30000-30049	30100-30149	30200-30249	30300-30349	30400-30449	30500-30549	30600-30649	30700-30749	30800-30849	30900-30949	31000-31049	31100-31149	31200-31249	31300-31349	31400-31449	31500-31549	31600-31649	31700-31749	31800-31849	31900-31949	32000-32049	32100-32149	32200-32249	32300-32349	32400-32449	32500-32549	32600-32649	32700-32749	32800-32849	32900-32949	33000-33049	33100-33149	33200-33249	33300-33349	33400-33449	33500-33549	33600-33649	33700-33749	33800-33849	33900-33949	34000-34049	34100-34149	34200-34249	34300-34349	34400-34449	34500-34549	34600-34649	34700-34749	34800-34849	34900-34949	35000-35049	35100-35149	35200-35249	35300-35349	35400-35449	35500-35549	35600-35649	35700-35749	35800-35849	35900-35949	36000-36049	36100-36149	36200-36249	36300-36349	36400-36449	36500-36549	36600-36649	36700-36749	36800-36849	36900-36949	37000-37049	37100-37149	37200-37249	37300-37349	37400-37449	37500-37549	37600-37649	37700-37749	37800-37849	37900-37949	38000-38049	38100-38149	38200-38249	38300-38349	38400-38449	38500-38549	38600-38649	38700-38749	38800-38849	38900-38949	39000-39049	39100-39149	39200-39249	39300-39349	39400-39449	39500-39549	39600-39649	39700-39749	39800-39849	39900-39949	40000-40049	40100-40149	40200-40249	40300-40349	40400-40449	40500-40549	40600-40649	40700-40749	40800-40849	40900-40949	41000-41049	41100-41149	41200-41249	41300-41349	41400-41449	41500-41549	41600-41649	41700-41749	41800-41849	41900-41949	42000-42049	42100-42149	42200-42249	42300-42349	42400-42449	42500-42549	42600-42649	42700-42749	42800-42849	42900-42949	43000-43049	43100-43149	43200-43249	43300-43349	43400-43449	43500-43549	43600-43649	43700-43749	43800-43849	43900-43949	44000-44049	44100-44149	44200-44249	44300-44349	44400-44449	44500-44549	44600-44649	44700-44749	44800-44849	44900-44949	45000-45049	45100-45149	45200-45249	45300-45349	45400-45449	45500-45549	45600-45649	45700-45749	45800-45849	45900-45949	46000-46049	46100-46149	46200-46249	46300-46349	46400-46449	46500-46549	46600-46649	46700-46749	46800-46849	46900-46949	47000-47049	47100-47149	47200-47249	47300-47349	47400-47449	47500-47549	47600-47649	47700-47749	47800-47849	47900-47949	48000-48049	48100-48149	48200-48249	48300-48349	48400-48449	48500-48549	48600-48649	48700-48749	48800-48849	48900-48949	49000-49049	49100-49149	49200-49249	49300-49349	49400-49449	49500-49549	49600-49649	49700-49749	49800-49849	49900-49949	50000-50049	50100-50149	50200-50249	50300-50349	50400-50449	50500-50549	50600-50649	50700-50749	50800-50849	50900-50949	51000-51049	51100-51149	51200-51249	51300-51349	51400-51449	51500-51549	51600-51649	51700-51749	51800-51849	51900-51949	52000-52049	52100-52149	52200-52249	52300-52349	52400-52449	52500-52549	52600-52649	52700-52749	52800-52849	52900-52949	53000-53049	53100-53149	53200-53249	53300-53349	53400-53449	53500-53549	53600-53649	53700-53749	53800-53849	53900-53949	54000-54049	54100-54149	54200-54249	54300-54349	54400-54449	54500-54549	54600-54649	54700-54749	54800-54849	54900-54949	55000-55049	55100-55149	55200-55249	55300-55349	55400-55449	55500-55549	55600-55649	55700-55749	55800-55849	55900-55949	56000-56049	56100-56149	56200-56249	56300-56349	56400-56449	56500-56549	56600-56649	56700-56749	56800-56849	56900-56949	57000-57049	57100-57149	57200-57249	57300-57349	57400-57449	57500-57549	57600-57649	57700-57749	57800-57849	57900-57949	58000-58049	58100-58149	58200-58249	58300-58349	58400-58449	58500-58549	58600-58649	58700-58749	58800-58849	58900-58949	59000-59049	59100-59149	59200-59249	59300-59349	59400-59449	59500-59549	59600-59649	59700-59749	59800-59849	59900-59949	60000-60049	60100-60149	60200-60249	60300-60349	60400-60449	60500-60549	60600-60649	60700-60749	60800-60849	60900-60949	61000-61049	61100-61149	61200-61249	61300-61349	61400-61449	61500-61549	61600-61649	61700-61749	61800-61849	61900-61949	62000-62049	62100-62149	62200-62249	62300-62349	62400-62449	62500-62549	62600-62649	62700-62749	62800-62849	62900-62949	63000-63049	63100-63149	63200-63249	63300-63349	63400-63449	63500-63549	63600-63649	63700-63749	63800-63849	63900-63949	64000-64049	64100-64149	64200-64249	64300-64349	64400-64449	64500-64549	64600-64649	64700-64749	64800-64849	64900-64949	65000-65049	65100-65149	65200-65249	65300-65349	65400-65449	65500-65549	65600-65649	65700-65749	65800-65849	65900-65949	66000-66049	66100-66149	66200-66249	66300-66349	66400-66449	66500-66549	66600-66649	66700-66749	66800-66849	66900-66949	67000-67049	67100-67149	67200-67249	67300-67349	67400-67449	67500-67549	67600-67649	67700-67749	67800-67849	67900-67949	68000-68049	68100-68149	68200-68249	68300-68349	68400-68449	68500-68549	68600-68649	68700-68749	68800-68849	68900-68949	69000-69049	69100-69149	69200-692

GOLDEN, N.J.

SCHLESINGER, H. "Gene-DNA-Deoxyribose-Nucleic-Acid Interaction in the Human Viral Disease of Tuberous Sclerosis," *VIRUS AND CELLS*, Vol. 1, No. 1, 1959, pp. 1-10.

SO: Sire Si-90-53 15 Dec. 1963

4

110

Crystalline inclusions in the virus of the tobacco mosaic disease. II. M. I. Goldblum. *Microbiology*, U. S. S. R. 7, 1423 (1960); *Chem. Zentr.* 1940, I, 520; et al. in 33, 3812. The virus of the tobacco mosaic disease is enclosed in the Ivanovsky crystals. From their appearance X-inclusions contain no virus. M. G. M. St.

AM  
GOLDIN (M. I.). I. Tobacco-mosaic virus as influenced by micro-  
organisms. II. Adsorption of Tobacco-mosaic virus by micro-  
organisms. *C.R. Acad. Sci. U.S.S.R.*, N.S., xx, 9, pp. 735-740.  
1938.

The first of these two papers on the relations between viruses and  
micro organisms in culture and under natural conditions describes a  
series of experiments in which both the non-sterile tobacco mosaic virus  
[R.A.M., xvii, p. 809] in tomato juice and the sterile filtrate (filtered  
through 13 candles) were more rapidly inactivated (at 25°C.) under  
aerobic than under anaerobic conditions. The sterile filtrate of the  
virus was found to lose its activity almost completely on the second  
day in the presence of a pure culture of *Torula kefir* under aerobic  
*Bacillus mycoides*, *Bacterium coli communis* occupying an inter-  
mediate place. Regular records of the hydrogen ion concentration  
showed that the effect of the organisms on the virus was not conditioned  
by changes of  $P_H$ .

AIAA METALLURGICAL LITERATURE CLASSIFICATION

In experiments on the adsorption of tobacco mosaic virus by micro-organisms, described in the second paper, samples of juice of tomato infected with either ordinary tobacco mosaic virus or with the crystal line virus, both previously filtered through L3 candles were added to cultures of micro-organisms with different  $P_h$  values, flasks without micro-organisms serving as controls. All flasks were kept for two hours in a thermostat at 37° and then for 24 hours in a refrigerator, after which all preparations were centrifuged three or four times for five minutes at a speed of 1,000 r.p.m., the supernatant liquid decanted each time, and finally the virus content of the sediment and of the last washing liquid was determined by inoculation on *Nicotiana glutinosa*. The results showed that the virus was adsorbed by *Bacillus megaterium* and *Schizosaccharomyces*, particularly in an acid medium.

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PROCESSES AND PRODUCTS 501

**Tobacco mosaic virus propagation by tomato seeds**  
M. I. Golding, *Mosambi* (U. S. S. R.) 8, 613-18  
in English, 619 (1959).—Mosaic-stricken tomato plants contain tobacco mosaic virus on the surface of the seeds. This was detd. by exposing tobacco leaves to contact with the pulp of tomato seed coats. The tobacco plants became infected. The stricken tomato seeds can be disinfected with only a small loss in germination capacity, by treatment with 10% HCHO, dild. 1:500, for 5 min. Then the HCHO is poured off. Two hrs. later the seeds are rinsed 5 times with water, dried overnight and placed in a 1% soln. of KMnO<sub>4</sub> for 5 min. Then they are rinsed, soaked overnight, dried in a moist chamber for 2 days and sown. In this procedure KMnO<sub>4</sub> can be replaced by 1.5% NaOH soln. (10 min.) or by a 1% soln. of perox (30 min.). Only 28% of the plants grown from treated seeds were diseased. Among control plants 14% were affected.

## AIA:SEA METALLURGICAL LITERATURE CLASSIFICATION

GOLDIN (M. I.). **A virus strain of mosaic disease of the aucuba-type in Tomato.** *C.R. Acad. Sci. U.R.S.S., S.S.*, xxv - 7, pp. 630-632.  
1 fig., 1939.

In the course of microscopic examination of the protein inclusions encountered in tissues of plants affected with tobacco mosaic, a method of diagnosis widely applied on one of the State vegetable farms near Moscow, the author met with a virus, designated strain A, which differed from the virus of ordinary tobacco mosaic. Seedling tomato plants infected by strain A developed strikingly deformed filiform leaves, yellow mosaic symptoms appearing after one to two months. The strain caused local necroses on leaves of *Nicotiana sylvestris*, but no mosaic, thus differing from ordinary tobacco mosaic and resembling the aucuba mosaic virus. Furthermore, tissues of tomato plants infected with strain A showed similar intercellular inclusions to those characteristic of the aucuba mosaic virus (namely, solid, brownish, granulated or oval inclusions, long needles, and, rarely, hexagonal crystals). The strain A retained all its properties when heated at 70 [°C] for 25 minutes. It is concluded that this variant is a type of aucuba mosaic not previously recorded in the U.S.S.R. The author also observed an 'enation' virus causing outgrowths from the lower surface of the leaf blades in tomato and tobacco plants, and producing peculiar modifications in the leaf veins, which appear to be inverted, so that the hairs are on the upper instead of on the lower side of the blade.

## PROCESSES AND PROPERTIES

110

**Mulberry bacteriosis.** L. P. Starygina, M. I. Gol'din, N. M. Lyaginina and T. I. Tryasunova. *Miroshul'got* U.S.S.R. 9, 282-285 (in English, 202-4) (1940). Various strains of *Bact. mori* (I) were isolated from various samples of infected mulberry leaves from the Ukraine and Crimean S.S.R. and other regions of the U.S.S.R. It was found that these strains are identical in their morphology, physiology and agglutinating actions and correspond with the I described by Smith (*Nature* 31, 762 (1910)). The cultures of I are stable and preserve their virulence at low temp. ( $-60^{\circ}$ ) over a long time. High temp. and desiccation shorten the period of virulence. Seeds do not spread the disease. Decaying infected mulberry leaves can preserve the virus over winter in the soil and cause the disease to spread during the vegetative season. The spread of I by way of the root system could not be proven. T. Lannes.

Inst. Agric. Microb., Moscow

A

Mosaic disease of greenhouse tomatoes and its control  
M. I. Goldin. *Microbiology* (U.S.S.R.), 9, 741-829  
English, 739 (May); cf., p. 35, 2553. In disinfecting  
germinating seeds by HCOH and permanganate the exposure  
to permanganate can be extended to 3 min without affect-  
ing germination. It is quite probable that the infection  
spreads by way of the soil during plant growth through  
the roots of diseased plants, especially in greenhouse plots.  
Chloroplatin is ineffective for soil disinfection. The use of  
disinfected seeds and heat sterilization of the soil is best  
for virus control.

## PROCESSES AND PROCEDURES

*J.C.*

Interrelations between mosaic virus and ascorbic acid in the tobacco plant. M. L. Golding, *Unif. Lond.* and G. T. R. S. 26 (1939) 439-446. English. Data are presented on the content of ascorbic acid in sound and infected tobacco plants. The acid form of ascorbic acid was used. By titration against 2,6-dichlorophenol-phenoxy. The following method was adopted. 2 gms. of fresh leaves, then veins removed, were ground with sand in a mortar and treated with 15 ml. of a mixt. of metite phosphoric acid and V.H.S.O<sub>4</sub>, then 10 ml. of V.H.S.O<sub>4</sub> to 2 g. of metaphosphoric ester. The homogenate of this mixt. was centrifuged at 10,000 revs. for 5-10 min. The results were the following:

## Amount of ascorbic acid in mg. per gm. of leaves

Infected plant	Sound plant	Percent
N. 120	0.212	31.7
N. 121	0.211	30.8
N. 122	0.113	18.0
N. 123	0.123	25.1
N. 124	0.138	20.4
N. 125	0.263	32.9
N. 126	0.211	36.4
N. 127	0.210	25.1
N. 128	0.176	31.7

Infected plant	Sound plant	Percent
N. 129	0.127	34.1
N. 130	0.322	30.4

## Amount of ascorbic acid in mg. per gm. of leaves

Infected plant	Sound plant	Percent
N. 131	0.142	37.8
N. 132	0.139	38.7
N. 133	0.147	38.7
N. 134	0.148	37.1
N. 135	0.188	41.1
N. 136	0.195	38.7

The amount of ascorbic acid was always standardised to 100% of the value found in the sound plant, and it is thus found that all infected plants show a reduction of the vitamin due to the disease. It is to prove that the reduction of the infected plants showing a deep green mottle were the result of, with the following results:

## Amount of chlorophyll in mg. per gm. of leaves

Infected plant	Sound plant	Percent
N. 137	1.32	100.0
N. 138	1.24	92.3
N. 139	1.23	92.3
N. 140	1.12	84.6
N. 141	1.12	84.6
N. 142	1.08	82.6

## 11 references

W. H. Krappe

GOLDBECK, . . .

MILTON, M., "Study of Cyst-telline Infection in Tomatoes Affected by Tomato Disease," in Virus Diseases of Plants and Measures for Their Control, Works of the Conference on Virus Diseases of Plants 1940, Publishing House of the Academy of Sciences USSR, Moscow, 1941, pp. 36-41. M.L.C. SoF

SC: Sirs G-44-44 16 Sept. 1942

GOLDIN, V.I.

GOLDIN, V.I. "Some New Data on the Crystalline Inclusions Found in Polycrystalline Gold," Sibirskie Zapiski (Lektsiiy) v Akademii Nauk SSSR, vol. 52, 1946, pp. 755-757. TUL FWA

SO: Sire Si-90-53 15 Dec. 1953

GOLDBECK, K.L.

GOLDBECK, K.L. "Classification of the Tomato Streak Virus," Mikrobiologija, vol. 16, no. 4, 1977, p. 390-391. (M.S.)

SO: Sire Si-60-53 3 Dec. 1983

PA 63/49T47

GOL'DIN, M. I.

USSR/Medicine - Plants, Diseases  
Medicine - Tomatoes

Dec 48

"Practices in the Struggle Against Mosaic and  
Streak in Tomatoes," M. I. Gol'din, A. P.  
Partyevskaya, Inst. of Microbiol, Acad. Sci USSR, 6  
pp

"Dok v-c Ak Sel'khoz Nauk" No 12

Directions for growing healthy tomato plants include: eliminating infected plants before and a few months after planting in greenhouses and again on planting in the ground. Antivirus processing of the skin of the seed is important. Lowering

63/49T47

USSR/Medicine - Plants, Diseases  
(Contd)

Dec 48

the temperature in greenhouses may contribute to the development of streak. Submitted 22 May 47.

63/49T47

USSR/Medicine - Microbiology  
Medicine - Virology

JUL/AUG 48

"Reaction of Petunia With the Virus Causing  
Mosaic Disease in Tomatoes," M. I. Gol'din,  
Inst of Microbiol, Acad Sci USSR, Moscow, 4 pp

"Microbiology," Vol XXII, No 4 [pp 191-193].

Petunias were inoculated with: (1) sap of  
tomato plants with mosaic disease or other  
necrotic formations on their leaves, and (2)  
extract from dried leaves of tomato plants  
preserved for over a year. Shows that petunias  
are affected in a manner similar to tomatoes.

■  
USSR/Medicine - Micro-  
biology (Contd)

JUL/AUG 48

Disproves theory that necrotic conditions in  
petunias are caused by a separate virus.  
Establishes possible basis for isolating tomato  
mosaic virus. One experiment shows that activ-  
ity of sap of diseased tomatoes decreases after  
10-minute heat treatment at 80°. Includes  
three tables. Submitted 5 Nov 47.

■  
44/49T74

GOLDIN, M. I.

CIA-RDP86-00513R000515630005-6

CIA-RDP86-00513R000515630005-6

USSR/Medicine - Viruses  
Medicine - Plants, Diseases

Sep/Oct 48

"Specificity of Filiform Virus Inclusions," M. I. Gold'in, Inst. of Microbiol., Acad Sci USSR, Moscow, 4½ pp

"Mikrobiologiya" Vol XVII, No 5

Assertion of Sheffield and Kassanis that differences in morphology of virus inclusions within limits of tomato mosaic virus group are determined by meteorological conditions (Ann Appl Biol, Vol XXVIII, 4 pp, 360, 1941) is erroneous. Gold'in's experiments show that the filiform inclusions are due solely to infection of plant by a specific virus. Describes

18/49T57

USSR/Medicine - Viruses (Contd)

Sep/Oct 48

principal differences in behavior of virus particles connected with formation of Ivanovskiy's crystals and filiform inclusions in the plant cell. These particles are located simultaneously within the cell in two phases, some distributed in protoplasm and others concentrated as filiform inclusions. Submitted 15 Mar 48.

18/49T57

GORDON (M. L.) & PAROVSAYA (Mme A. P.). Mal'pazanu no chelyopy. Tzelen' k Krasnui. (Woodiness of Tomatoes in the Crimea.) *Moskobskaya Mysl' budzhi*, 19, 6, pp. 527-531, 1 fig., 1950.

Experiments carried out in the summer of 1949 at the Microbiological Institute of the U.S.S.R. Academy of Sciences, Moscow, confirmed that *Haplodrassus mordetii* is the main vector of the woodiness disease of tomatoes [tomato leaf curl virus] (*R. I. M.*, 28, p. 48) in the Crimea. The disease was most prevalent in the Zatoka district, where the insect was very abundant. In field tests under standard conditions of infection, the 'steamed' varieties Druzie, Alpatova, and Grbovskiy were the most resistant, being free from infection in three different localities.

In the course of this study the authors observed in the Krasnodar district tomato leaf curl virus disease first described by Sukhov and Vavk. A new virus disease of tomato - leaf curl and its vector *Acalitus tenella* (*C. R. Acad. sci. URSS*, N. S., 36, p. 433, 1947) and breaking of tomato leaves (*R. I. M.*, 26, p. 16), also of virus nature, is common to spotted wilt.

*Review of Applied Mycology-*

GOLDIN (M. I.) & NAZAROVNA (Mine M. Z.). Reaktsiya *Cyphomandra betacea* na virusy mozaiki tabaka i strika. [Reaction of *Cyphomandra betacea* to Tobacco mosaic and streak viruses.] Mikrobiologija [Microbiology], 20, 4, pp. 340-342, 1 fig., 1951.

In work on the resistance of *Cyphomandra betacea* to tobacco mosaic and tomato-streak [a strain of tobacco mosaic] viruses [R.A.M., 30, p. 590] at the Microbiological Institute of Sciences, Moscow, U.S.S.R., three leaves of young plants, grown from seed and free from tobacco mosaic virus, were infected by rubbing with sap from tomato plants infected with tobacco mosaic. A month later three out of six plants showed mosaic symptoms, with deformity of the leaves and the presence of inclusion bodies. The remaining three became diseased only after a second inoculation. However, 13 out of 24 control plants not rubbed developed conspicuous mosaic symptoms during the summer. Tomato scions, severely infected with mosaic and streak, were grafted on to 50 *C. betacea* plants, but seven of these remained quite healthy. It was found that while *C. betacea* could be infected, though less easily than tomato and tobacco, with various strains of tobacco mosaic virus both by grafting and sap rubbing, infection was not always possible, for some reason still unknown.

1951-1952, 173 JES

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APPROVED FOR RELEASE: Thursday, September 26, 2002

CIA-RDP86-00513R000515630005-6"

USSR/Biology (Agriculture) - Bacterial  
Fertilization Jan 52  
"Silicate Bacteria," M. I. Gol'din, Cand Biol  
Sci

"Nauka i Zhizn'" Vol XIX, No 1, pp 31, 32

Aluminosilicates, which occur in all kinds of soils, contain 15-20% K. This element, on the basis of work done by V. G. Aleksandrov, G. A. Zak, A. Ye. Koronova, I. P. Remzov, N. I. Gushkina, et al., is liberated if silicate bacteria are added to the soil. Yields of cotton, summer wheat, etc., are increased by

203<sup>th</sup>4

USSR/Biology (Agriculture) - Bacterial  
Fertilization Jan 52  
(Contd)

20% in this manner, so that addition of potassium fertilizers becomes unnecessary.

203<sup>th</sup>4

GOL'DIN, M. I.

Mosaic Disease

Mosaic of the plantain. Dokl. AN SSSR 88 no. 5, 1952

9. Monthly List of Russian Accessions, Library of Congress, May 1953. Unclassified.

34934. GOLDIN, M. I. Mikroby v  
vzdušnoj sverži Atmosfery zemli, 1953.  
P. 361-72. 7 illus. Text in Russian.  
*Title tr.:* Microbes in the air.

*Contains account of the horizontal and  
vertical distribution of microbes in the*

34934

*cont*

atmosphere. The paucity of microbes in the Arctic and after snowfall, as well as in the upper atmosphere and over open seas, is discussed and explained.

*Copy seen: DLC.*

GOL'DIN, M. I.

Viruses

Pathogenic microbes and viruses, R. A. TSion. Reviewed by M. I. Gol'din. Fel'd. akush No. 1 1953.

9. Monthly List of Russian Accessions, Library of Congress, June 1953, Unclassified.

GOL'DIN, M.

Sep/Oct 53

USSR/Biology - Agriculture, Virus Diseases of Plants

"New and Convincing Proof of the Reproduction of Plant Viruses in the Bodies of Insects," M. Gol'din

Mikrobiologiya, Vol 22, No 5, pp 616-618

On the basis of work done by American, British, and Japanese investigators (5 refs), discusses reproduction of viruses of plant diseases in the bodies of insects which transmit these diseases but suffer no ill effects themselves. Concludes from the published data that the viruses do reproduce in the bodies of insects, that insects rather than plants may form the natural reservoirs of virus diseases affecting plants, and that there is no essential difference between plant viruses and animal viruses.

Source #26479

GOLDIN, M.I.

GOLDIN (M. I.). Мозаика у Подорожника. [*Plantago* mosaic]. Докл. Акад. Наук СССР [C.R. Acad. Sci. U.R.S.S., N.S.], 33, 5, pp. 933-936, 2 figs., 1953.

Studies at the Institute of Microbiology, Academy of Sciences, [of Moscow], U.S.S.R., on the mosaic virus of plantain (*Plantago major*) [R.A.M., 21, p. 227] indicate that it differs distinctly in chemical constitution from tobacco mosaic virus, particularly in the content of aromatic amino acids and sulphur (three times more in *Plantago* mosaic virus). The latter is easily and transmitted to tobacco, tomato, and *Plantago*, necrotic spots (2 to 3 mm. in diameter) appearing on infected leaves in three to four days and finely patterned mosaic symptoms in seven to ten. *Nicotiana glutinosa* and petunia reacted to both *Plantago* mosaic and tobacco mosaic with local necrosis only.

Addition of 0.1 N hydrochloric acid to plant tissues dissolved the characteristic crystalline inclusions, which were stained bright red with safranin and green with Janus green.

The differences in the reactions of tomato and *Plantago* to *Plantago* mosaic virus are reflected in the morphology of the cell inclusions.

Review of Applied Mycology  
Vol. 33 Apr. 1954

GOL'DIN, Mark Iosifovich.

Virus inclusion bodies in plant cells. Moscow, Izd-vo Akad. nauk SSSR, 1954. 116 p.

(55-34234)

SB736.26

MILENUSHKIN, Yu.I.; GOL'DIN, M.I., redaktor; REDIN, Ye.I., redaktor;  
NEVRAYEVA, N.A., tekhnicheskiy redaktor

[Nikolai Fedorovich Gameleia; sketch of his life and scientific  
work] Nikolai Fedorovich Gamaleia; ocherk zhizni i nauchnoi deiatel'osti.  
Moskva, Izd-vo Akademii nauk SSSR, 1964. 157 p. (MLRA 8:3)  
(Gameleia, Nikolai Fedorovich, 1859-1949)

GOLDWYN

Luminescent microscopic analysis of virus inclusions in a plant cell. M. I. Goldin. *Doklady Akad. Nauk S.S.R.A.* 95, 657-659 (1954). Luminescence microscopic data, by luminescent analysis of virus particles in plant cells (mosaic infection); aurophosphine and Acridine Orange give the best results. The virus inclusions give great luminescence, although their nucleoprotein compn. may be expected to give a red color; the latter appears to be the result of partial denaturation. If the specimens are treated with  $CC_6CO_2H$  at 80°, luminescence ceases in the nucleus and the chlorophyll, but the inclusions show bright orange-red luminescence. Hence the treatment with  $CC_6CO_2H$  (5%) is recommended for pre-treatment of the specimens. G. M. Kostapoff

Translation M-560, 28 thru 51

USSR/ Biology - Phytopathology

Card 1/1 Pub. 22 - 50/56

Authors : Gol'din, M. I.

Title : Inclusions in cow wheat (*Melampyrum, Nemorosum*)

Periodical : Dok. AN SSSR 99/5, 855-857, Dec 11, 1954

Abstract : The finding of albumen inclusions in cow wheat is reported. The chemical composition of these inclusions found in cow wheat, and other representatives of this family, was established through cytochemical investigation. Six references: 2-USSR and 4-German (1885-1951). Table; illustrations.

Institution: Academy of Sciences USSR, Institute of Microbiology

Presented by: Academician V. N. Sukachev, October 11, 1954

RAUTENSHTEYN, Ya. I.; KRASIL'NIKOV, N. A., GOL'DIN, M. I., redaktor; GRAKOVA,  
Ye. D., tekhnicheskiy redaktor

[Bacteriophagy; general information on the phenomenon of phages  
and their significance for some industries] Bakteriofagia; ob-  
shchie svedenija o iavlenii fa;ji i ego znachenii v riade pro-  
izvodstv. Moskva, Izd-vo Akademii nauk SSSR, 1955. 141 p.  
(MLRA 9:1)

1. Chlen-korrespondent AN SSSR, (for Krasil'nikov)  
(Bacteriophagy)

GOL'DIN, Mark Iosifovich; MISHUSTIN, Ye.N., doktor biologicheskikh nauk,  
nauchnyy redaktor; GOLUBKOVA, V.A., redaktor; YUSZINA, N.L., te-  
hnicheskiy redaktor

[Microbes around us] Mikroby vokrug nas. Moskva, Gos. kul'turosvet-  
izdat, 1956. 15 p. (MIRA 10:4)

1. Chlen-korrespondent Akademii nauk SSSR (for Mishustin)  
(Micro-organisms)

GOLDIN, M.; BRODSKIY, V.; FEDOTINA, V.

Microspectrophotometry of protein inclusions in plant cells. Zhur.  
ob.biol. 17 no.5:393-395 S-0 '56. (MIRA 9:12)

1. Institut mikrobiologii Akademii nauk SSSR, Institut morfologii  
zhivotnykh imeni A.N.Severtsova Akademii nauk SSSR.  
(PLANT CELLS AND TISSUES) (NUCLEOPROTEINS)  
(SPECTROPHOTOMETRY) (FLUORESCENCE MICROSCOPY)

C. 61 D. i USSR / Virology - Plant Viruses.

2

Abs Jour: Ref Zhur-Biol., No 9, 1953, 331-36.

Author : Golik, M. I., Fedotina, V. L.

\*Inst : Not given.

Title : Distribution of Protein (Virus) Inclusions in Different Cactus Species.

Orig Pub: Byul. Gl. botan. sada. AN SSR, 1:16, No 26, 63-64.

Abstract: From these authors' data, the character of cactus mosaic, formerly described by other investigators, is not related to protein virus inclusions. As a result of investigating 60 cactus species, related to 18 different families, protein inclusions were found for the first time in the following 6 species: Echinocereus procumbens (individual threads, collected in a cluster); *Phyllocactus*

Card 1/2

40

GOL'DIN, M.I.

A new method for separating plant viruses. Dokl.AN SSSR 108 no.1:  
151-152 My '56. (MLRA 9:8)

1. Institut mikrobiologii Akademii nauk SSSR. Predstavлено акаде-  
миком V.N. Shaposhnikovym.  
(Viruses)

GOL'DIN, M.; FEDOTINA, V.

Electron microscope ixamination of Impatiens balsamina tissues for  
virus-like particles. Dokl. AN SSSR 108 no.5:953-954 Ju '56.  
(MDRA 9:10)

1. Otdel virusov rasteniy Instituta mikrobiologii Akademii nauk  
SSSR. Predstavлено академиком V.N. Shaposhnikovym.  
(BALSAMS) (VIRUSES)

GOLDMAYER

✓A study of the tobacco mosaic virus by the method of ultrathin slices. M. I. Goldmayer and V. I. Eudinina. *Bio-lady Akad. Nauk SSSR*, TIT, 1116-10(1956).—Ultrathin slices of the tobacco leaves were examined by electron microscopic method (cf. J. Brandes, *Naturwissenschaften* 41, 161(1958)) and typical microphotographs at 14000 X are shown. The Palade method of fixation (cf. *J. Exptl. Med.* 93, 285(1952)) lead to decomposure of most if not all the crystal virus inclusions yielding artifacts. Fixation by much more rapidly penetrating 5% ac.  $\text{CCl}_4\text{CO}_2\text{Et}$  readily preserved the normal crystal inclusions of the virus making them suitable to examine with even an ordinary high-power microscope at 700 X; this method also reduces to the min. the formation of artifacts. It was shown that the virus aggregates in the cells to form relatively large aggregates of crystal appearance although not all cells are populated in this manner.

G. H. Koss [initials]

GOLDIN, M.I.

Reactions of *Gomphrena globosa* to tobacco mosaic virus (with  
summary in English). Vop.virus. 2 no.3:168-171 Vy-Je '57.

(U) (a 10:10)

1. Institut mikrobiologii AN SSSR, Moskva.

(VIRUSES)

tobacco mosaic, reactions of *Gomphrena globosa* (Rus))

USSR/Virology - Plant Viruses.

P-2

Abs Jour : Ref Zhur - Biol., N. 11, 1958, 52606

Author : Gol'din, M.

Inst :

Title : Second Development of Virus Particles.

Ori; Pub : Oktiyar', 1957, No 7, 176-178

Abstract : No abstract.

Card 1/1

- 1 -

GOLDIN, M.I., doktor bio.nauk

Interesting experiments in microbiology. 1958, no. 12-13.  
Ja '58. (MISA 10:12)  
(Microbiology--Study and teaching)

USSR/Virology - Viruses of Plants.

E

Abs Jour : Ref Zhur Biol., N. 6, 1959, 23786

Author : Gol'din, M.I.

Inst : Institute of Microbiology, Academy of Sciences USSR

Title : Investigation of Virus Inclusions As a Method of Study  
of Viruses of Plants.

Orig Pub : Tr. In-ta mikrobiol. AN SSSR, 1958, vyp. 5, 258-264

Abstract : Investigations of virus inclusions by the author are summarized, considerations regarding the significance of inclusions in the doctrine of the nature of plant viruses are expressed. According to the data of the author and other investigators, virus inclusions are so far the only indication of symptomless virus disease of plants. The formations of crystalline virus inclusions in the cells of potato plants may apparently progress by a

Card 1/2

USSR/Virology - Viruses of Plants.

E

Abs. Jour. : Ref. Zhar Biel., No. 6, 1959, 23786

type of gelatinization, and not only by a type of coagulation. -- M.I. Gol'din

Card 2/2

- 5 -

GOL'DIN, M.I., doktor biol.nauk; YURCHENKO, M.A., aspirant

Method of controlling tomato mosaic and tomato streak. Zashch.rast.  
ot vred. i bol. 3 no.6:36 N-D '58. (MIRA 11:12)

1. Institut mikrobiologii AN SSSR.  
(Tomatoes--Diseases and pests) (Mosaic disease)

GOL'DIN, M.I.; YURCHENKO, M.A.

Direct sowing in open ground as an antiviral measure in controlling  
tomato mosaic and streak. Trudy Inst. mikrobiol. i virus. AN Kazakh.  
SSR 3:166-168 '59. (MIRA 13:2)  
(ALMA-ATA REGION--TOMATOES--DISEASES AND PESTS)  
(VIRUS DISEASES OF PLANTS)

GOL'DIN, M.I.; MIKENICHEVA, Z.N.

Virological analysis of mountain plantations of potatoes in the Alma-Ata region. Trudy Inst. mikrobiol. i virus. AN Kazakh. SSR  
3:169-172 '59.

(MIRA 13:2)

(ALMA-ATA REGION--POTATOES--DISEASES AND PESTS)  
(VIRUS DISEASES OF PLANTS)

GOL'DIN, M.I.

A simple universal technique for virological testing. Vop. virus h  
no.1:112 Ja-7 '59. (MIRA 12:h)  
(VIRUSES,  
universal technic for virol. testing (Rus))

17(2), 17(4)

SOV 10-109-1-49/53

AUTHORS: Gol'din, V. I., Vostrova, N. G.

TITLE: A New Strain From the Group of Tobacco Mosaic Virus, Producing Intranuclear Inclusions

PERIODICAL: Doklady Akademii nauk SSSR, 1959, Vol 126, Nr 4, pp 183-185  
(USSR)

ABSTRACT: At the end of 1957 the authors found a virus not identical with the CI strain producing inclusions not only in the plasma, but also in the nucleus. It was called after the place of its discovery: Kazakh strain of the group of tobacco mosaic virus. In the USSR this was the first time that a virus producing intra-nuclear inclusions was found. Apart from a number of important properties characteristic of the common virus, Kazakh virus also shows properties characteristic of a number of viruses different from the tobacco mosaic virus. The authors worked out a method which allows long lasting observations under the microscope *in vivo*. Cilia and the neighboring tissue of young tobacco plants infected with Kazakh virus were examined by means of this method. Figure 2 shows the various forms of inclusions in the protoplasm and in the nuclei of cilia. It could

Card 1/3

SCV/CB-1974 43/5\*

A New Strain From the Group of Tobacco Mosaic Virus, Producing Intracellular Inclusions

It is observed that the development of inclusions in a cell starts at the basis and continues toward the apex. The distribution of the inclusions in certain stages of time, is irregular even in homogeneous tissues. An irregular distribution of virus particles could be observed in cells as well as in cells of the epidermis. It was found that the virus flagellum, a process of the intranuclear inclusion has distinct blunt ends. Flagella completely developed in the protoplasm, have pointed thin ends. Although the ends develop simultaneously and in the same medium, they differ in their structure. Apparently, the flagellum protruding from the nucleus also contains some nuclear substance. Virus flagella in the nucleus protruding from it and surrounding it, as well as flagella developed in the protoplasm, show a negative reaction with Feulgen's reagent. There are 1 figure and 6 references, 1 of which is Soviet.

ASSOCIATION: Institut mikrobiologii Akademii nauk SSSR (Institute of Microbiology of the Academy of Sciences, USSR)  
Card 2/3

GOL'DIN, M.I., doktor biolog.nauk. Prinimala uchastiye DANILOVA, L.V.,  
kand.biolog.nauk. MISHUSTIN, Ye.N., doktor biolog.nauk,  
nauchnyy red.; TUREVICH, Z.S., red.; YUSFINA, N.L., tekhn.red.

[In the world of invisible beings; album] V mire nevidimykh;  
al'bom. Sostavlen M.I.Gol'dinym pri uchastii L.V.Danilovoi.  
Nauchn.red. E.N.Mishustin. Moskva, Izd-vo "Sovetskaja Rossiia,"  
1960. 40 plates (in portfolio).  
(MIRA 13:12)

1. Chlen-korrespondent AN SSSR (for Mishustin).  
(MICROBIOLOGY--PICTORIAL WORKS)

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"APPROVED FOR RELEASE: Thursday, September 26, 2002

CIA-RDP86-00513R000515630005-6

GOL'DIN, M.I.; YURCHENKO, M.A.

Big bud of tomatoes and virus yellows in the Alma-Ata region.  
Trudy Inst. mikrobiol. i virus. AN Kazakh. SSR 5:132-147 '61

(Alma-Ata region--Tomatoes--Diseases and pests)  
(Virus diseases of plants)

(MIRA 15:4)

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"APPROVED FOR RELEASE: Thursday, September 26, 2002

CIA-RDP86-00513R000515630005-6"

KOL'DIN, M.I.; YELISEYEVA, Z.N.

Virus diseases of potatoes. Vest.AN Kazakh.SSR 17 no.1:95-97 Ja  
'61. (Potatoes--Diseases and pests) (MIRA 14:1)  
(Virus diseases of plants)

PROTSENNKO, A.Ye.; LEGUNKOVA, R.M.; GOL'DIE, N.I., doktor biol. nauk,  
otv. red.; PASHKOVSKIY Yu.A., red.izd-va; SUS. KOVA, L.A.,  
tekhn. red.

[Technique of electron microscopic investigations in phyto-pathology] Tekhnika elektromikroskopicheskikh issledovanii  
v fitopatologii. Moskva, Izd-vo Akad. nauk SSSR, 1962. 46 p.  
(MLR 15:10)

(Plant diseases—Research) (Electron microscopy)

GOL'DIN, M.I.; YELISEYeva, Z.N.

Investigation of virus diseases of potatoes in the mountainous areas of Alma-Ata Province. Trudy Inst.mikrobiol.i virus.AN Kazkah.  
SSR 6:203-210 '62. (MIRA 15:8)

(ALMA-ATA PROVINCE--POTATOES--DISEASES AND PESTS)  
(ALMA-ATA PROVINCE--VIRUS DISEASES OF PLANTS)

GOL'DIN, M.I.; YELISEYEVA, Z.N.

Etiology of potato leafroll in the high-mountain and other areas  
of Alma-Ata. Trudy Inst.mikrobiol.i virus.AN Kazkah.SSR 6:211-215  
'62. (MIRA 15:3)  
(ALMA-ATA--POTATO LEAFROLL)

GOL'DIN, M.I.; YURCHENKO, M.A.

Tomato mosaic in Kazakhstan. Trudy Inst.mikrobiol.i virus,AN  
Kazkah.SSR 6:216-222 '62.  
(MIRA 15:8)  
(KAZAKHSTAN--TOMATOES--DISEASES AND PESTS)  
(KAZAKHSTAN--MOSAIC DISEASE)

EL'LIN, Mark Iosifovich; V.I., N.S., sovet. nauch. ruk.,  
prof., otd. red.; KALYAZHEVA, T.A., red. izd.-v';  
POLYAKOVA, T.V., tekhn. red.

[Virus inclusions in plant cells and the nature of viruses]  
Virusnye vkluchenija v rastitel'noj kletke i virusy  
sov. Moskva, Izd-vo AN SSSR, 1963. 232 p. (VIR 16:12)  
(Virus diseases of plants)

GOL'DIN, M.I.; BUDAGYAN, Ye.G.

Effect of plant juices on the tobacco mosaic virus. I. N. S. A. n.  
SSR. Biol. nauki 16 no. 9875-80 1963

1. Institut mikrobiologii AN Armenskoy SSR.

GOLDIN, M. E.

"Financing the airline hijack."

Report presented to the FBI Field Laboratory, Boston, Massachusetts

Received and filed, FBI Boston, Massachusetts

L 33528-65  
ACCESSION NR: AP5005477

Zapon and brought into contact with NIKFI photographic film of type NK and exposed for 10 to 30 days at 2 to 5C. For the St.3/Kh16N9T pair, the comparison of the microstructure with the autoradiograms shows the amount of Fe migrations in the St.3-Kh16N9T pair. The Ti/steel St.3 pair shows a boundary of several strata whose thicknesses and structures depend on the temperature and pressure during laminations. Orig. art. has: 4 radiographs.

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy institut metallov (Ukrainian Scientific Research Institute of Metals)

SUBMITTED: 00

POL: 00

SUB CODING: 00, MM

NO RIF 30V: 001

OTHER: 000

Card 2/2

WILHELM HEINRICH; LIMA, CHILE, 1944.

Heinrich was arrested in 1947 and given 10 years in prison for his role in the coup against President Primo de Rivera. He was released in 1957. He died in 1973.

GOL'DIN, M.L., inzhener.

The use of radioactive isotopes in the cement industry. ESement 22  
no.516.10 S.O '56. (MERA 10:1)  
(Cement industries) (Radioisotopes--Industrial applications)

GOL'DIN, M.L.; PROKHOROV, G.A.; FEL'DMAN, L.S.

Automatic device for checking the hardness of parts by means of  
residual induction. Zav. lab. 23 no.3:357-361 '57. (MIRA 10:6)  
(Metals--Hardening) (Automatic control) (Magnetic testing)

GOL'DIN, M.L., inch.

Estimation method of determining the density of slurry by the absorption of rays. TSement 23 no.6:21-24 N-D '57.

(MIRA 11:1)

(Cement industry) (Gamma rays - Industrial applications)

AUTHOR: Gol'din, M.L., Prokhorov, G.A., Fel'dman, L.S. 32-9-31/43

TITLE: A Device for the Determination of the Strength of Small Particles According to Residual Induction (Pribor dlya opredeleniya tverdosti malikh detalej po ostatochnoy induktsii)

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol. 23, Nr 9, pp. 1129-1131 (USSR)

ABSTRACT: With reference to the description of the device TAM-1 in Zavodskaya Laboratoriya, 1957, 3, 357 the description of a new construction of the device TAM-2 is here given. This is intended for the strength test of small parts by means of residual induction. Instead of a mechanized switch a photoelectric switch, which responds in the case of parts with a cross section of 2 mm and more, is used. The sensitivity of the device is increased by the introduction of additional amplification cascades in the amplifier unit. Holding up the part in the magnetizing coil is brought about by a special construction of the magnetic stabilizer. There follows a description of the device. It has already been introduced into production and controls 30 different small parts made of steels: 20KhN3A, 2Kh12, 30KhGSA. As residual induction in parts with a sufficiently high demagnetization factor is proportional to coercive force, the applicability of the control of a thermal treat-

Card 1/2

32-9-j1/43

A Device for the Determination of the Strength of Small Particles According to Residual Induction

ment of the type of steel concerned within a certain domain of strength can be judged on the device TAM-2 also on the basis of the relationship between coercive force and strength. As shown by investigations, a control of the quality of thermal treatment after residual induction of parts is impossible in the case of steels 45, 40KhN, 40KhNMA and 38KhA, because there is no unique relationship between strength and residual induction within the domains of strength of these parts which are of practical interest. There are 2 figures and 1 table.

AVAILABLE: Library of Congress

Card 2/2

Editor - V. N. Polenov, and A. N. Slobodchikov (Part 2d.), S.N.

Lebedev Institute of Radiophysics and Electronics, Institute of Mathematics, Institute of Cybernetics, Institute of Mathematics and Cryptology, Institute of Mathematics and Cryptology, Dr. Sci. Secretary, Dr. K. K. Tikhonov, Dr. K. K. Tikhonov (Secretary), Dr. K. K. Tikhonov (Secretary).

Ed. of Publishing House: P. N. Selyanin; Tech. Ed.: T.P. Polenova.

PURPOSE: This book is intended for specialists in the field of science and industry who use radioactive isotopes in the study of materials and processes.

COVERAGE: This collection of papers covers a very wide field of utilization of tracer methods in industrial research and control techniques. The topic of this volume is the use of radioisotopes in the machine and instrument-manufacturing industry. The individual papers discuss the applications of radioisotopes in techniques of the study of metals and alloys, problems of friction and tribocorrosion, metal cutting, engine performance, and detection of metals. Several papers are devoted to the use of radioisotopes in the automation of industrial processes for control and measurement devices. Other chapters concern the use of radioisotopes in the production of radiation sources, in the investigation of the properties of organic substances, in the investigation of the properties of polymers, and in the investigation of the properties of organic materials. Many new types of radioactive tracer methods are described, such as active and static isotopes and radiation from the National Economic and Science Award-1977. No personalities are mentioned. References are given at the end of most of the papers.

Birney, G. J., Bill, V. Novoselov, and Te, Ya. Ovcharenko (Partially Institute, Inst. P. N. Lebedev AN SSSR); Kontravaryayev, V. N. (Institute of Radiochemistry, Kurchatov Institute, USSR); and Dzhez-Bureau, Institute of Radiochemistry, AN SSSR); New type of a radioactive thermometer 159

Kardanov, Yu.O. (Institut po radiofizike i radioelektronike RAN, Institute of Radioelectronics and Radioelectronics, USSR); Institute of Radioelectronics, RAS, Institute of Radioelectronics, USSR); Industrial Instruments for Gamma-ray Density Control 165

Vul'fer, A.K., and M. L. Goldin (Fizicheskii radiofizicheskii institut Akademii Nauk USSR "Zavod Kontrolirovo-izmeriteliyakh priborov, Instrumets of Physics and Technology, Academy of Sciences, and Monitoring and Metering Instrumentation Factory, Chernobyl, and Study of the Density of Iron-ore Slurry on the Basis of Gamma-ray Absorption 173

Vlasyuk, G.B. (Ministerstvo sotsial'nogo elektronika i radioelektroniki SSSR - Ministry for the Construction of Electric Power Stations in the USSR); Performance of Gamma-ray Shield Filters on Bridges 180

Lobanov, Iu. M. (Leningradskiy fiziko-khimicheskiy institut Akademii Nauk SSSR - Leningrad Institute of Physics and Chemistry, Academy of Sciences, USSR); Application of the Gamma-Densimeter Developed by I.M. Academic of Sciences, USSR 184

Izobryuk, S.M. (Ministerstvo rechnogo flota SSSR - Ministry of the River Fleet, USSR); Use of Radioactive Radiation in River Transport 190

Varnitsa, A.Ya. (Vsesoyuznyy nauchno-issledovatel'skiy institut mezhgorye promyshlennosti - All-Union Scientific Research of the Mining Industry); Use of Radioactive Radiation in the Automatic Control and Regulation of Technological Processes of Dairy Production 194

Smirnov, S.M. (Vsesoyuznyy nauchno-issledovatel'skiy institut mezhgorye promyshlennosti - Central Scientific Research Institute of the Leather and Shoe Industry); Use of Radioactive Isotopes in the Leather Industry 196

AUTHOR: Gol'din, N. B.

TITLE: Determination of the Density of Iron-Ore Pulp in  
Gamma Ray Absorption  
(Vopros o determinatsii sastavov i gornykh massivov po zaryazchennym  $\gamma$ -izluchey).

PUBLISHER: Atomnaya Energiya - 1968. MP 4, p. 107-110 (USSR)

ABSTRACT: The composition of the mixture to be determined was:  
 $\text{SiO}_2 = 29.64\%$ ,  $\text{Al}_2\text{O}_3 = 1\%$ ,  $\text{Fe}_2\text{O}_3 = 64.35\%$ ,  $\text{CaO} = 0.63\%$ ,  $\text{MgO} = 2.88\%$ , and other contaminations - 1.3%. This mixture is in a mechanical system pressed through a tube with a diameter of  $d$  cm  $\phi$ . On this occasion, it is also attained that the tube is firmly filled. The tube is now presented to a well collimated gamma-ray. The intensity of the gamma-ray is now subjected to different degrees in dependence on the density of the mixture. The absorption can be represented by the empirically obtained formula:  $I_p = 10483 e^{-\mu d \rho}$

The linear absorption coefficient of the mixture  $\mu$  was determined in three different manners. The first method measured the whitening of the gamma-rays of  $\text{Co}^{60}$  on passage through lumpy-shaped rock which had the same composition as the mixture.

Card 1/2

Determination of Density of Iron-Ore Pulg in Gamma Ray  
Absorption

This measurement was made in the following sequence:  
In the second method a special apparatus was used and the linear absorption coefficient was determined from the absorption coefficient. The third method consisted of the determination of calibration of the absorption coefficient. The coefficients obtained in these three methods were plotted together to  $\lambda = 0.2 \mu$ . There are 7 figures, 3 tables, 3 slides  
referred.

SUBMITTED: February 21, 1957

AVAILABLE: Library of Congress

Card 2/2

1. Iron ores-Gamma ray absorption-Measurement      2. Gamma rays  
Absorption-Measurement

117-10-7411/10

AUTHOR: Col'din, M.L., Krivchikov, A.V., Marinic, N.V., et. al. Director,  
L.L., Engineers

TITLE: Gamma-Relay for Pre-Mining Equipment / Gamma-relay dlya pred-  
rujnykh ustrojstv v zoloto-dremyashchimisya

PERIODICAL: Gornyy zhurnal, 1959, Nr 7, sp 60-61 (1959)

ABSTRACT: The Khar'kovskiy zavod kontrol'no-izmeritel'nikh aparatov  
(The Khar'kov Testing and Measuring Devices Plant "KII") has  
built a gamma-relay for the mining industry. The laboratory  
studied various operating relays and concluded that detectors  
of gamma-relay radiation must be fed by direct current. Photo-  
sensitive counters must be used as detectors. The intensity of  
their feed is almost equal to the anode feed of the electronic  
tubes used in the gamma-relay, and a power rectifier could  
be built. The authors give a detailed description of the  
device. The use of several such relays at the crushing plant  
VIMOF showed that the flow on the transmitting belt could be  
efficiently controlled, thus avoiding clogging or breakage of  
the belt. There are 2 photos, 1 schematic diagram and 1  
Soviet reference.

Card 1/1

1. Mining equipment    2. Gamma relay-applications

AUTHOR: Gol'din, M.L.

307/150-5a-8/z1

TITLE: Automatic Contactless Device for Measuring Solid and Liquid Pulp (Avtomatičeskiy beskontaktnyy izmeritel' tverdogo v zhidkoy s'pe)

PERIODICAL: Tsvetnyye Metally, 1958, N 8, pp 52 - 56 (USSR)

ABSTRACT: The method now considered most suitable for determining pulp density is based on the relation between this and the absorption of gamma radiation. The first apparatus was made in 1954 under the direction of Ye.G. Kardach (Ref 1) and this was followed in 1955 by one made at Niteploprapor under the direction of G.G. Jordan and L.S. Furman. The Kharkovskiy zavod kontroliro-izmeritel'nykh priborov (Kharkov Instrument Works) has produced an improved variant, based on work carried out in 1956. This is based on an ionisation-chamber detector (Ref 8) of the multiple-layer type (Figure 4), this being preferred to the cylindrical on the basis of a comparison of the volt-amp characteristics (Figure 1).

$Cs^{134}$  is used as the source to irradiate the working and compensating cells (Figure 5). In making the instrument

Card 1/2

SOV/135-3c-6-3/a1

Automatic Contactless Device for Measuring Solid in a Liquid Pulp

model of the device (Figure 4) special attention was paid to safety. It was mounted about 1 m from the classifier overflow at the Yuzhnnyy gorno-obogatitel'nyy kombinat, (Southern Mining-beneficiation Combine) in Krivoy Rog, protected by a lead-filled steel hemisphere. Laboratory tests have shown an accuracy of  $\pm$  1%; full-scale tests at the combine are going on.

There are 4 figures and 10 Soviet references.

ASSOCIATION: Khar'kovskiy zavod KIP (Kharkov Instrument Works)

Card 2/2

GOL'TIN, M. L., Candidate Tech Sci (disc) -- "The use of gamma-radiation to determine the density of pulp in the automatic control of the densities of iron ore".  
Moscow, 1959. 10 pp (Acad Sci USSR, Inst of Mining), 150 copies (KL, No 22, 1959,  
11b)

15 (6)

AUTHOR: Goldin, M. I.

TITLE: The Automatic Contactless Control of Various Material Levels and of the Density of Slurry (Avtomaticheskij  
beckontaktnyy kontrol' srovney materialov i plavkih zilima)

PERIODICAL: Tsement, 1959, Nr 1, pp 17 - 18 (1959)

ABSTRACT: The author states that the Laboratoriya radioaktivnykh metodov Khar'kovskogo zavoda kontrolyechnykh priborov (KIF) (The Laboratory of Radioactive Methods of priborov (KIF)) (The Laboratory of Control and Meters, has produced and tested a type of control transmitter. It is a gamma relay for indicating the layer level of any mineral substance, and a contactless density meter. The scheme of the gamma relay is shown in a diagram (Fig. 1). The gamma relay receiver is fed from an alpha-particle source. The receiver is shown in a diagram (Fig. 2). The gamma pointer is recorded by an STS-5 meter. The problem of measuring density is solved by the compensatory method, using an ionization chamber as a radiation detector. The electronic scheme

Card 1/2

M771-A-1-2-3-4-

The Automatic Contactless Control of Various Material Levels and of the Density of Slurry.

is shown in a diagram (Fig. 3). It follows from laboratory and industrial experiences that for a density of 1.1 kg/l., the accuracy in reading the density indicated lies within the limits  $\pm 1\%$ . The author concluded by saying that the application of a gamma ray allows various problems relative to the control of material levels such as clinker limestone, slurry and others. Also the use of a contactless density meter permits the automatic regulation of the slurry's density in conformity to the corrected transmitter's indications.

There are 3 diagrams.

Card 2/2

AUTHORS: Plaksin, I. N., Corresponding Member of the AS USSR,  
Gol'din, V. L., Engineer

TITLE: The Measurement of the Pulp Density by Gamma Rays  
(Izmereniye plitnosti pul'py gamma luchami)

PERIODICAL: Gornyy zhurnal 1959, Nr 1, pp 71-74 (USSR)

ABSTRACT: Experiments on determining the pulp density in a concentration plant are described. The contactless method of measuring the pulp density is quoted as most efficient and as corresponding to requirements of the mining industry. Experiments on analysing the technological process of ore dressing were carried out in the concentration plant of the Krivoy Rog South Concentration Combine. As result of these experiments it was found that the spilling threshold of the classifier is one of the most convenient places for measuring pulp density. A collecting device for securing a correct measuring of pulp density was developed during above mentioned experimental work. This collecting device was installed on the spilling threshold of the collector. Its purpose is to secure a complete filling of the pipe duct of the classifier

Card 1/2

307/127-59-1-21/26

The Measurement of the Pulp Density by Russian Authors

and in this manner to realize a correct functioning of the latter. This cradle-shaped device serves as well to avoid the sacking of hard ingredients, thanks to an experimentally fixed, -0° arrangement of its sidewalls. There are 1 set of graphs, 1 diagram and 2 Soviet references.

ASSOCIATION: Institut gornogo deli Akademii Nauk SSSR (Institute of Mining Engineering of the AS USSR), Khar'kovskiy zavod KIP (KIP Khar'kov Plant)

per *Kol'ko*

Card 2/2

14(5)

SIW/127-59-3-15/22

AUTHORS: Gol'din, M.L., Generalov, G.S., Krivchikov, A.P.,  
Dolgallo, S.M. and Laskovets V.F., Engineers.

TITLE: The Industrial Trials of a Radioactive Meter for  
Pulp Density (Promyshlennyye ispytaniya radioaktivnogo  
izmeritelya plotnosti pul'py )

PERIODICAL: Gornyy zhurnal, 1959, Nr 3, pp 55-57 (USSR)

ABSTRACT: The authors propose a method of measuring the pulp  
density with the aid of radioactive isotopes, and  
describe the apparatus used in the experiment. A  
stream of gamma-rays from a fixed source RI (figure  
1) passes through the tube T and compensatory taper  
K simultaneously, exposing to rays two ionizing  
chambers, working chamber RK and compensational cham-  
ber KK which have a common collecting electrode. The  
ion current, originating in the working chamber is  
the function of the pulp density. Changes in pulp  
density cause the change in importance of the gamma-  
ray stream penetrating into the working chamber, and

Card 1/2

SCW/127-59-3-15/22

The Industrial Trials of a Radioactive Meter for Pulp Density.

a differential ionizing current originates in the chambers. This current finally reaches a contactless ferro-dynamic DF indicator and a secondary VF set with a similar indicator. The VF set marks the oscillation of the current on a diagrammatic sheet of paper. When compared with the results of laboratory tests, inscribed density indications differed by 0,4%. There is 1 diagram and 1 graph.

Card 2/2

BUDAGYAN, Ye.G.; LOZHNIKOVA, V.N.; GOL'DIN, M.I.; CHAYLAKHAN, M.Kh.

Effect of gibberellinlike substances on the tobacco mosaic virus.  
Dokl. AN Arm. SSR 36 no.2:111-116 '64. (MIRA 17:3)

1. Institut mikrobiologii AN Armyanskoy SSSR i Institut fiziologii  
AN SSSR. 2. Chlen-korrespondent AN Armyanskoy SSSR (for Chaylakhan).

"APPROVED FOR RELEASE: Thursday, September 26, 2002

CIA RDP86

APPROVED FOR RELEASE: Thursday, September 26, 2002 CIA-RDP86-00513R000515630005-6

GOLDIN, M. L. (MSP)

Ministry of Defense  
Ministry of Defense  
Moscow  
1930

Ministry of Defense  
Ministry of Defense  
Moscow  
1930

ACC NR: AP6028673

SOURCE CODE: UR/OC20/66/166/005/1221/1222

AUTHOR: Gol'din, M. I.; Faykin, I. M.; El'piner, I. Ye.

ORG: Institute of Biological Physics, AN SSSR (Institut biologicheskoy fiziki AN SSSR)

TITLE: Microflow induced by ultrasound waves in plant cells containing occlusions  
of tobacco mosaic virus

SOURCE: AN SSSR. Doklady, v. 166, no. 5, 1966, 1221-1222

TOPIC TAGS: biologic vibration effect, virus, ultrasound, cytology

ABSTRACT: Cells of the hair-like fibers of tobacco plants that contained occlusions of the tobacco mosaic virus were subjected to the action of ultrasonic vibrations by bringing within microscopic distance of single cells a point source of ultrasound waves (a needle with a point having a diameter of 0.1 mm). The amplitude of vibrations of the needle point was 1.0-2.0 microns. Microscopic observation of cells containing crystalline plates of the common tobacco mosaic virus showed that the virus crystal in the cell rotated and moved from one end of the cell to the other under the action of microflow currents induced in the cytoplasm by ultrasound. The crystal did not disintegrate, as it does when the cell wall is injured. Occluded crystal aggregates of the

Card 1/2

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ACC NR: AP6028673

cypomander strain of tobacco mosaic virus moved as a whole under the effect of ultrasound and did not disintegrate into component crystals. The long thread-like occlusions of the Kazakh strain of the virus were subjected to gyrations and winding motions, but also remained unaltered. Virus particles dissolve rapidly in cell juice: apparently they remained in the cytoplasm. One may assume that the crystal virus aggregates were organically bound to microscopic and submicroscopic cell structures and rotated together with them under the action of the flow induced by ultrasound. The vacuoles in the cytoplasm that were filled with cell juice also remained intact. This article was presented by Academician A. A. Iushenetskiy on 6 April 1965. Orig. art. has: 1 figure. [JPRS: 36,932]

SUB CODE: 06 / SUBM DATE: 02Apr65 / ORIG REF: 002 / OTH REF: 002

Card 2/2 *copy*

AUTHOR: Gol'din, M. I.; Agoyeva, N. V.; Tumanova, V. A.

ORG: Institute of Microbiology, AN SSSR, Moscow (Institute micro-

TITLE: Use of a method of studying virus inclusions in tissue culture and isolated plant cell experiments designed to investigate interactions between viruses and their host plants

SOURCE: AN SSSR. Izvestiya. Seriya biologicheskaya, no. 5, 1966,  
760-766

TOPIC TAGS: plant physiology, plant injury, plant disease, host plant, virus, plant disease virus, virus inclusion, plant metabolism, plant morphology

ABSTRACT: Experiments were conducted to determine to what degree and under what conditions the study of viral inclusions in plant cells facilitates analysis of host cell-virus particle relationships, both in tissue cultures and in individual cells. Kazakh-strain TMV inclusions were found in 50% of the cells of tested calluses and, on the average, in every fifth cell of callus sections. Thus, frequency, abundance, and diversity of the kinds of inclusions in the cellular cytoplasm and nucleus may be useful indicators for use in long-term

Card 1/2

UDC: 632.3

ACC NR: AF0031606

tissue culture studies. However, viral inclusions in tissue culture cells possess unique properties. Iwanovskiy crystals are retained for long periods in dead tissue-culture cells. Inclusions of X-strain TMV were found not only in individual tissue culture cells, but also outside the cells in the nutrient, where they presumably can survive and multiply. Factors such as cytoplasmic density appear to have as much influence on inclusion formation as the number of virus particles. Long-term *in vitro* observations of callus cells containing viral inclusions suggest that in some cases these formations directly interfere with cell activity. Large aggregates of pointed or circular viral inclusions of Kazakh-strain TMV can congest the endoplasmic reticulum, thus impairing normal intracellular metabolism. One advantage of this method is that tissues can be studied grossly and do not have to be prepared for electron microscopy. Orig. art. has: 6 figures.

[W.A. 50]

SUB CODE: 06/ SUBM DATE: 16Nov65/ ORIG REF: 001/ OTH REF: 006

Card 2/2

FOR RELEASE: Thursday, September 26, 2002

CIA-RDP86-00513R000515630005-6

APPROVED FOR RELEASE: Thursday, September 26, 2002

CIA-RDP86-00513R000515630005-6"

GOL'DIN, M.I., inzh.; LYAL'CHENKO, K.Ya., inzh.

Skating rink in the backyard. Gor'kogo. Mosk. 34 no.12:32-33  
(MIRA 13:12)  
D '60.  
(Skating rinks)

End)

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156